FIVE YEARS EXPERIENCE AND STUDY

OF THE

Ocular Conditions of the Children in the Blind and Conservation of Vision Classes in the Public Schools of the City of Cincinnati.

By Dr. Louis Stricker, Oculist

Medical Director Blind and Conservation Vision Classes

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Ocular Conditions of the Children in the Blind and Conservation of Vision Classes in the Public Schools of the City of Cincinnati.*

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The relative merits of the Day School as compared with the Residential School is no longer a matter for serious discussion. The day schools for the blind and near blind have accomplished so much for these classes of children in the past five years that they have created for themselves a definite place in the educational system of this city, and have been the means of conserving the vision of a large percentage of these children, many of whom sooner or later would have drifted into a class for the totally blind, some actually would have become blind. By reason of the medical care and the favorable conditions under which these children are receiving their education fully 50% of them have improved and with but a few exceptions the remainder have remained stationary. Aside from these considerations it has come to be recognized that institutional care is not a good thing for the child. It deprives the child of the care and affection incident to home life, it loses its individuality in consequence of environment. Constant association with the blind leads to a contracted view as to the conduct of those on the outside and this to a lack of confidence in themselves, even those closely related to the blind fail to recognize their capabilities and possibilities.

In 1905 the Board of Education established a Class for the Blind Children, being the second city in the Union to do this. Acting along progressive lines the near blind were separated from the totally blind in 1917. This was made possible through an Act of the Legislature, (G. C. O., Sec. 7755-61), whereby funds were made available to give this new idea a practical tryout. Our superintendent, Mr. Randall J. Condon, early appreciated the possibilities of this movement, and he induced the Cleveland Board to permit Mr. R. B. Irwin to devote one week per month to the organization of such *Conservation of Vision Classes* in our schools. The tremendous value of this new departure in the training of the blind and near blind will become apparent as we proceed.

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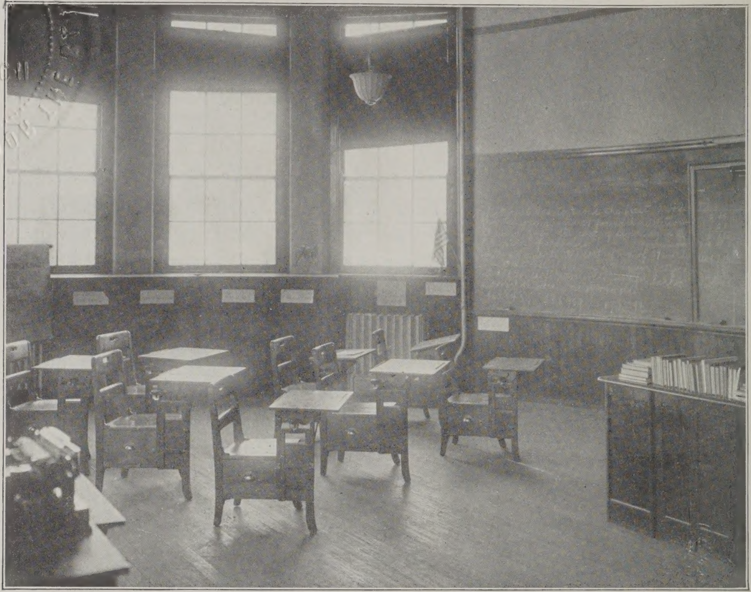
*Read before the Cincinnati Ophthalmological Club, April 12, 1923.

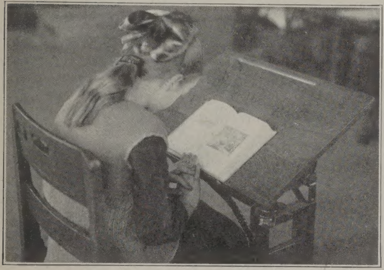
Aside from the special education necessary to enable the blind child to read the embossed type, to write on the special slate and to use the point system, the child today receives its instruction at the side of the seeing, and the written work is examined and corrected by the special teacher. Mingling with the seeing stimulates selfreliance and an inate desire to compete with the seeing along lines hitherto deemed impossible, a teaching so often counteracted by the misdirected sympathy of well meaning friends. Their education in the Day Schools has become a greater factor in counteracting an agelong misconception namely that the blind are helpless and useless and is proving in a practical way the possibilities and capabilities of the blind, and the near blind.



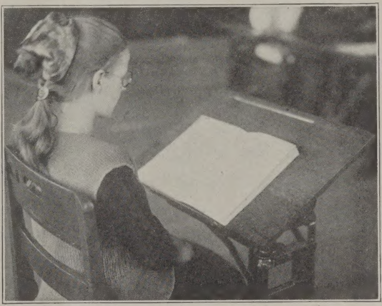
This is Not a Flashlight Exposure, but the Ordinary Day Light. Note the Illumination on the Desks. This Room Has Not Been Especially Selected. All Rooms Used for This Purpose Have Similar Light Facilities.

Through zeal and misconception as to what constitutes blindness many not blind but nearly so, have been educated as such, to their lasting misfortune. This basic error once recognized, radical changes followed and led to the separation of the two classes, namely into the totally blind and those with some degree of vision who today are educated as seeing children in what are known as Conservation of Vision Classes.

Every State institution has a fair percentage of these borderline cases, which under the existing views are not considered capable of being educated with the seeing, and were being educated as blind against the day when they would become so. This fallacy inevitably became the underlying basis for all the misconceptions and educational errors which followed in its wake. These are the children who, while in the classes with the seeing, never did get along, were always 2 to 3 years retarded in their studies as compared with the seeing of the same age, who were put down as mentally deficient and finally in desperation transferred to a State School for the Blind or such department in a public school. From time immemorial the problem of educating those with very defective vision has been merged with that of the totally blind. Though long ago recognized by the writer as an error of judgment and a moral wrong, no solution presented itself. It remained for a blind man of exceptional ability, Mr. R. B. Irwin, to clear up this perplexing situation. True, in England the so-called Myopic Classes had been established. But their object was to prevent further progress of the high Myopes.



Not a Word was Said as to the Position the Child was to Take. The Position is the One Naturally Assumed.



Note the Difference in the Position Assumed with Correcting Glasses Properly Adjusted.

In these classes however the underlying idea is to educate the near blind as seeing children under such favorable conditions as will conserve such vision as they still possess. There can be no doubt but that this movement is the greatest advance ever made and has opened up avenues of usefulness formerly deemed impossible.

The classes are limited to 10-12, supervised by teachers especially qualified for the work. Class rooms are selected for their favorable light conditions, with electrical illumination installed under the direction of an illuminating engineer, so as to insure as good a light on the darkest day as on the brightest. The text books used are the same as provided for the seeing child, but printed in extra large type, so as to make it easier for the child to see the text without effort or eyestrain. Desks are movable so as to permit the child to get the best position for light at different times of the day. Finally the conditions under which the eyes are to be used are under the supervision of the oculist of the board. All candidates for these classes are examined by him. It is his duty:

1. To establish a standard of vision,* under which admittance is considered advisable.

2. To make a careful study of each individual case and make a report of his findings and recommendations, (1) to the State Supervisor of the work; (2) to the Superintendent of the department; (3) to the Board of Health. This report specifies the nature of the condition, the cause, the correction of same where possible, and such recommendation and advice as needed to the end that vision be preserved and education possible.

3. To act in an advisory capacity on all matters relating to ocular hygiene.

4. To give a course of lectures to teachers and nurses in the department, on refraction and diseases of the eye, in order that they may have a more intelligent understanding of the conditions and the difficulties under which their special charges labor. A greater bond of sympathy between the child and teacher is thus established.

During the formative period, while the eyes are still undergoing development, inherited weakness, disease, and physical abnormalities may be intensified by improperly fitted glasses and by excessive and improper use of their eyes, whereas by reason of periodic and scientific advice and correction such conditions may be arrested or greatly improved; hence the service of an oculist is highly essential to the success of this movement.

Cases are referred to the school physician through the school nurse, whose attention has been called by the class teacher to cases which she judges need attention or who are singled out in the course of the routine physical examinations. Should it develop that the case does not fall within the prescribed standard the child is referred for an examination of its eyes to one of the public eye clinics or told to consult its private oculist. However, should it come within the prescribed limit, the case is referred to the oculist or medical director of the Blind and Conservation of Vision Classes.

The child comes with a card from the school physician and should it be accepted, notice is at once sent to the principal of the school which the child is attending and a like notice is sent to the principal of the special department, reporting the findings and the reason why such attendance is necessary. The nurse of the department then visits the home, takes up the matter with the parents, and sees that the child is brought in the class. At the same time this gives her an opportunity to study the home conditions and to give wholesome advice where this is called for.

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*STANDARDS OF ADMISSION TO CONSERVATION OF VISION CLASSES

Only cases suspected of falling within the following classification are to be referred to the school oculist by the examining physician:

1. Children who cannot read more than 6/24 at distance and who cannot read 2.00 at 20 centimeter.

2. Myopes under the age of 14 who have more than 8 diopters of myopia.

3. Hyperopes who have symptoms of asthenopia and who have more than 8 diopters of hyperopia.

4. Children with maculae, nebulae, luekomae, which interfere with sight and lead to eye strain.

5. Children who have an astigmatism of more than 3.5 diopters and whose vision cannot be brought above 6/24.

6. Children with interstitial keratitis, uveal or corneal disease under treatment, who have been withdrawn from regular classes.

7. It is assumed that these conditions exist after the proper refractions have been made.

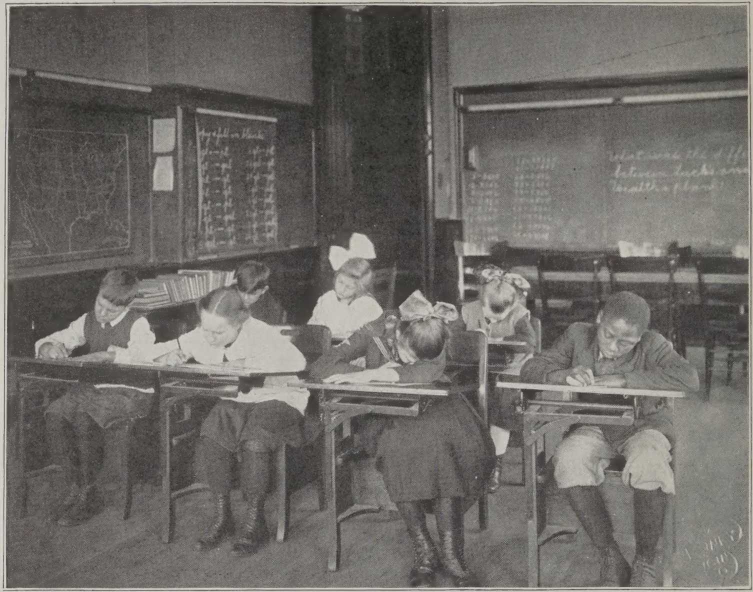
The fullest co-operation has always been extended by oculists and physicians. In a few instances opposition was withdrawn after it had been fully explained, that there would be no attempt to treat a private case, the sole object being to determine the status of the case, and to decide whether or not it belonged in the Conservation of Vision Class. It has not always been an easy task to convince parents that attendance was desirable in the best interest of the child. Opposition was found to be largely due to failure to appreciate how low the degree of vision really was, and the danger to vision incident to a continuance in the regular classes, and the advantages offered by these special classes. After parents once realized all these factors compliance with the recommendation quickly followed.

Coming as they do from all parts of the city, often long distances, the younger children are provided with a guide, who for a small remuneration brings the child to school and takes it home again. In some cases parents have been induced to move their residence close to the school the child attends.

At the time of the separation of the near blind from the blind, the mentally deficient were likewise separated from both of these classes. A fair percentage of those blind at birth are found to be mentally deficient.

Those who have suffered from brain diseases, such as tumors, abscesses and brain injuries, meningitis are apt to belong in this class, whereas those who become blind shortly after birth due to eye diseases are as a class not mentally deficient, but like seeing children disclose varying degrees of mentality. The presence of the mentally deficient led not only to lax discipline but to retardation of the entire class hence their segregation seeming advisable. Fourteen such have been eliminated. One has been sent to the State Institution for the Feeble-minded, another to Home for Epileptics. At times cases present themselves which seem almost impossible of proper placement. Mentally defective blind however, are no longer educated with the blind of normal mentality.

The close of the 1917-18 school year found the classes made up of 11 blind and 37 in Conservation of Vision Classes. The close of 1922 disclosed 13 blind and 58 in Conservation of Vision Classes, a total of 71 children in the classes at the close of 1922. These children come practically from every school district in the city, demonstrating that no class of society is free from the diseases and conditions which make for low degrees of vision. It is true nevertheless that the majority of these cases are found among the poor, among whom privation, want and ignorance are at the root of even prenatal influences. Ten of the 58 children in conservation today are members of families recently come into this school district.

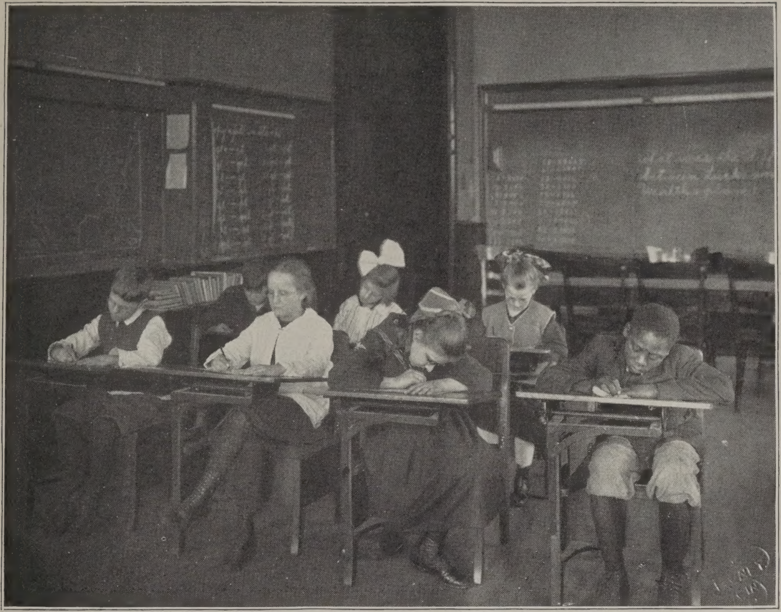


No. 4. Entire class at work without use of correcting glasses. Note the cramped positions assumed and then compare this with No. 5. The colored boy, however, had left his glasses at home.

During the past five years 225 children have been referred for examination and opinion as to the advisability of their attendance in these special classes. In every case a complete history was taken, and the examination made under atropine and the refraction estimated by retinoscopy.

I might say here at the outset, that it has been my endeavor to give a full correction. For one must not forget that we are dealing with a class of children who have very defective vision; all with less than 6/24 on the test-card, many with less than 6/60. It has been perfectly remarkable to see their faces light up when for the first time it became possible to see one or two lines at 6 Meters or 20 feet. Often this was only accomplished by a full correction. The same practice was followed for myopes as well as hyperopes. Only in myopia a plus glass of sufficient strength was added (3-4 D) to allow of close work with least convergence. Quite a number of these children wear bifocals.

In 105 cases it was possible to raise vision to such a point as to preclude attendance. The remaining 120 were accepted. And it should be borne in mind that in most of these vision could not be raised above 6/24ths or their refractive errors were of a very high degree. It was found that of these



No. 5.

120 cases, 71 disclosed marked pathologic changes, in the remaining 49 refractive errors alone could be found responsible for the low degrees of vision. The cases naturally divide themselves into two groups:

1. The totally blind.
2. Those still possessing some degree of vision, but who could not be profitably educated with the seeing. These are the children now being educated in conservation of vision classes.

This second group again divides itself into two groups:

1. Those disclosing demonstrable pathologic changes.
2. Those without demonstrable pathologic changes and in whom the low degrees of vision can alone be referred to high refraction error.

GROUP 1.

The Totally Blind.

Thirty blind children have been in attendance during the past five years. They represent 20% of the department. Their ages ranged from 6 to 16 years. But 5 of these were colored. There has been an average attendance of 14.

The causative factors of their blindness may be grouped under three general classes:

1. *Those of Congenital Origin* of whom there are 7:
   - 4 Central Nuclear Cataracts:
     - 1 Pennsylvania.
     - 2 Kentucky.
     - 1 Indiana.
   - 2 Buphthalmos.
   - 1 Microphthalmos.
2. *Resulting from Communicable Diseases:*
   - 10 Optics Atrophies:
     - 5 Cerebro Spinal Meningitis.
     - 3 Congenital Syphilis.
     - 2 Brain Tumors:
       - 1 Pituitary.
       - 1 Cyst Cerrebellum.
   - 10 Inflammation Eyes, Newborn:
     - 2 Macula Corneae.
     - 8 Leucoma Adherens.
       - 5 Local.
       - 1 Tennessee.
       - 2 Kentucky.
       - 1 West Virginia.
       - 1 South Carolina.
3. *Accidents:*
   - 3 Sympathetic Ophth.:
     - 1 Hit by Stone.
     - 1 Puncture Globe, Lead Pencil.
     - 1 Powder Explosion.

In all the removal of the injured eye came too late to save the second.

It is worthy of special note that 9 of the 30 cases did not become blind in Ohio.

A study of the 20 cases under the communicable group disclosed:

10 the blindness is due to Optic Atrophy.
- 2 of the Meningitis cases were mentally deficient.
- 1 of these subsequently died and the other is not doing well.
- 2 Brain tumor cases; both were operated upon, one of these subsequently died and the other is not doing well.

10 due to destruction of the cornea, 8 leucoma, all with maculae. All were due to inflammation of the eyes of the newborn. But 5 of these became blind in Cincinnati. Four date back to a time previous to the passage of the law making the use of a prophylactic compulsory, likewise the prompt report of these cases. But a single case has occurred in recent years. As has already been pointed out the other 5 cases, 1 came from Tennessee, 2 from Kentucky, 1 from West Virginia, 1 from South Carolina.

Note—There are 10 additional cases due to inflammation of the eyes of the newborn, in conservation vision classes in which injuries of like character have wrought havoc, but not to the same degree. Of these 3 did not develop in Hamilton County. One in Butler County, 1 in Tennessee, 1 in West Virginia.

In other words in 20 of the 30 cases the blindness could be traced back to the communicable diseases. One-half of these led to optic atrophy, the other half to destruction of the cornea.

Meningitis today is a greater menace to eyesight than inflammation of the eyes of the newborn. Strict enforcement of the statute has practically wiped out the latter, whereas we still are unable to control the former. Some day an effective serum will combat meningitis in its early stages and these cases of optic atrophy will cease to occur.

Congenital syphilis is the next great factor and is no doubt responsible for many cases grouped under congenital defects malformations, and diseases of the young.

The satisfactory situation as regards blindness among children, 30 in a school population of 57,000, with an additional 6 children at the State school, can be ascribed to a number of factors:

1. The publicity campaigns, which have directed attention to these fatalities, and awakened the public conscience.
2. The enforcement of law compelling proper care of the eyes of the newborn.
3. Control of communicable diseases by the Board of Health.
4. School inspection, and examination of the eyes of all children who have less than normal vision.
5. Efficient care and treatment of eye diseases by oculists.
6. Government control of venereal diseases.
7. The conservation of vision classes, the establishment of which in our public schools is a constructive movement in blind prevention of the highest order.

While a study of the ocular conditions prevalent among the blind children developed nothing new, nevertheless in a number of instances this led to the removal of diseased eyes put an end to irritation of the other. In several instances sufficient vision was restored to justify their transference to the conservation of vision classes. To recapitulate of the 30 blind children:

13	In the Class.
2	Feeble-minded.
3	Past School Age.
2	Left the State.
1	Left the County.
1	In Institution.
2	At State School.
1	Woodward High School.
2	Died.
1	Studying Profession.
2	Not as yet in.

GROUP 2.

The Conservation of Vision Classes.

Only those having 6/24 or less vision or who have very high degrees of hyperopia or myopia are admitted.

As has already been pointed out, these cases naturally divide themselves into two groups:

1. Those whose eyes disclose pathologic changes to which to greater or lesser degree the low degree of vision can be attributed.
2. Those whose eyes disclose no pathologic changes whatever, and in whom the low degree of vision can be solely ascribed to high refractive error. However, even in some of these cases this causative factor is not sufficient to explain the low degree of vision.

Of the 120 cases accepted:
- 49 were found to be normal.
- 71 Pathologic.

72 were Hyperopes:
- 37 of these were normal.
- 35 Pathologic.

48 were Myopes:
- 12 Normal.
- 36 Pathologic.

58 are in the classes today.

62 for a variety of causes are no longer with us:

11	Returned to regular Classes.
5	Become of age. Left School.
2	Left the County.
8	Left the State.
1	Married.
9	Gone to work.
1	Died.
9	Returned to Parochial School.
5	Could not be brought in.
1	Attending Night School.
7	Feeble-minded.
1	State School for Blind.
2	Not as yet admitted.
62	

Of the 58 children in the classes today, 35 disclose undoubted pathologic changes. Many of these changes do not fully account for their low degree of vision, nor do the refractive conditions in the remaining 23 fully account for the low degrees of vision.

The same holds true for the 62 cases no longer in the classes:
- 40 disclosed pathologic changes.
- 22 were what we call refractive cases.

In other words of the 120 cases:
- 71 were pathologic.
- 49 Normal.

A careful study of the refractive conditions disclosed:
- 72 Hyperopes.
- 48 Myopes.

	Hyperopes			Myopes			
	Normal Eyes	Path.		Normal Eyes	Path.		
In the Classes.............	14	16	30	9	19	28	58
Out of Classes............	23	19	42	3	17	20	62
	37	35		12	36		
			72			48	120

The hyperopes ranged from 1-3 D with an astigmatism of from 1-5 D.

The myopes ranged from 3-16 D with an astigmatism of from 1-3 D.

Nystagmus was a fairly constant symptom being present in 14 hyperopes and 6 myopes, l. e. in 16⅔%.

Two members of same family disclosed like conditions in 11 cases.

An analysis of the underlying pathologic conditions in the 71 cases, shows these to be much the same as those found responsible for the blindness, only here the ultimate outcome has been more fortunate.

An analysis discloses:

15 *Congenital Cases:*
- 6 Amblyopias.
- 9 Central Nuclear Cataracts.

7 *Development Errors:*
- 1 Ant. Capsular Cataract.
- 3 Coloboma Choroid.
- 1 Coloboma Iris.
- 1 Dislocation both Lenses.
- 1 Microphthalmos.

1 *Hereditary:*
- 1 Ptosis, both Eyes.

2 *Congenital:*
- 2 Buphthalmos. 25= 35.4%

COMMUNICABLE DISEASES.

19 *Congenital Syphilis:*
- 4 Partial Optic Atrophy.
- 1 Macula Cornea.
- 10 Interstitial Keratitis.
- 1 Choroiditis.
- 3 General Uvitis.

1 *Meningitis:*
- 1 Optic Atrophy.

1 *Measles:*
- 1 Leucoma Adherens.

10 *Inflammation Eyes, Newborn:*
- 5 Leucoma Adherens.
- 5 Macula Centralis. 31= 43.6%

6 *Toxaemias:*
- 5 Phyctenular Keratitis.
- 1 Zonular Cataract.

2 *High Myopias:*
- 1 Choroiditis.
- 1 Chorio-Retinitis.

3 *Brain Lesions:*
- 1 Tumor.
- 1 Abscess.
- 1 Pituitary Growth.

4 *Accidents:*
- 2 Leucoma Adherens.
- 1 Sympathetic.
- 1 Traumatic Cataract. 15= 22%

71 71=100%

25=35.4% Congenital hereditary and development errors exist. The vast majority do not lend themselves to any correction improvement.

31=43.6% are directly traceable to the communicable diseases. It should be emphasized that three of the inflammation of the eyes of the newborn did not occur in Hamilton County, and the remainder referable to a time previous to the passage of the law making use of a prophylactic compulsory, likewise early report to Board of Health of infected cases.

15=22% Scattered over a variety of causes none involving any considerable number.

In the very nature of things many of these pathologic cases do not lend themselves to an improvement of their degree of vision, still in isolated cases vision has been improved by operation and medical treatment.

The most marked improvement, however, was attained by the use of properly adjusted glasses. In many cases where glasses did not seem to give improvement at once, the end of a year found them reading an additional line or two on the test-card. In this manner 11 children have been so greatly improved that it has been possible to send them back to the regular classes.

A CRITICAL ANALYSIS OF THE HYPEROPES

Making an arbitrary division of the degrees of their Hyperopia, one finds:

	In the Classes			No Longer in the Classes		
	Normal	Path.	Total	Normal	Path.	Total
1—3D Low	4	11	15	17	12	29
3—5D Moderate	7	1	8	2	3	5
6—13 High	3	4	7	4	4	8
	14	16	30	23	19	42

From this it would appear that but 7 are high hyperopes, whereas in 23 cases the degree of hyperopia in no way accounts for the low visual acuity. In 17 cases the astigmatism ran from 2 to 4 D. At the end of a year two had improved, 18 conditions were stationary, in 4 cases the time elapsed has not been sufficient to draw any conclusions.

Eight disclosed high degree of hyperopia and the astigmatism ran as high as 5 D, 8 with 2 D, 9 with 3 D, 2 with 4 D, 2 with 5 D.

This shows:

44 with Low degree of Hyperopia.
13 with Moderate.
15 with High.

Out of the entire group it has been possible to increase the vision of 39 a little more than 50%.

A CRITICAL STUDY OF THE MYOPES

Of the 58 cases in conservation of vision classes today:

28 practically 50% are myopes.
9 are practically normal.
19 disclose pathologic changes.

Among those *WITHOUT demonstrable pathologic changes* the myopia ranged from 3 to 16 diopters with an astigmatism of from 1-3 D. In these cases vision was raised from 1 to 4 lines on the test-card and in the course of 1 to 2 years vision had been increased in 3 cases, remained stationary in 4 cases, sufficient time had not elapsed to draw conclusions in 2 cases. Among these same cases the myopia increased in 4, stationary in 3, too short a time to conclude in 2.

In spite of the increasing myopia there was a considerable increase in vision in 3 cases equal to 2 to 4 lines on the test-card. This increase of vision in all probability is the result of the full correction and the conscious vision aroused, and the improved conditions under which these children use their eyes.

Those WITH demonstrable changes, seem dependent on changes in the media, cornea vitreous lens, or are the result of congenital weakness of the coats of the eyeball, leading to elongation of the eyeball, and the changes thereby induced.

Vision remained stationary in	8
Increased	6
Time too short to conclude	5
	—19

Myopia remained stationary	6
Progressive	8
Time too short to conclude	5
	—19

There were:

12 *Moderate* Myopes 1. e. 1-6 D.
  7 showed signs of increase.
  4 to changes in the media.
  3 Axial.

4 *High Myopes* 7-10 D.
  None increased.
  3 due to Corneal opacities.
  1 Axial.

3 *Excessively High Myopes:*
  1 Lenticular.
  2 Hereditary and Progressive.

Of the 8 progressive, 7 are of such moderate degrees of myopia that they need give no immediate cause for alarm as to a serious outcome, since they are under careful supervision, as regards the use of their eyes.

Those out of the classes number 20. All save 3 disclose pathologic conditions much the same as those in the classes.

	In the Classes	Out of
Corneal Opacities	8	10
Partial Optic Atrophies	4	1
Congenital Amblyopia	1	..
Congenital Nuclear Cataract	..	1
Hereditary Progressive	2	2
Retinal Changes Axial	1	3
Irido Cyclitis	1	..
Post Cortical Cataract	1	..
Buphthalmos	1	..
	19	17

16 were Moderate Degree Myopes.
3 were High.
1 was Excessive.

From this it would appear that we have 28 myopic children in the classes, 20 are no longer with us; a total of 48 found to be in need of this special care. When one considers that out of a total school population of 42,000 in public schools, 15,000 in parochial schools, a total of 57,000, but 48 have been found requiring this special care, one must realize that at least in this community, high myopia is not the serious problem the text-books would have us believe.

Now what is being done to prevent these cases from becoming progressively worse?

1. Every effort is made to give them a perfect and total correction.
2. The Near Point is removed to at least 20 c. m. so as to prevent too great a degree of convergence.
3. Not to allow the child to bend its head too closely over its work, since this produces congestion of the orbital veins, which in turn retards the venous circulation in the eyeballs. Hence the effort to remove the near point to 20 c. m.
4. Too great convergence leads to pressure on the eyeballs by the ocular muscles.
5. Vision should not be taxed. Some one should read to the child.
6. Eyes should be used for close work as little as is possible.
7. Properly adjusted desks are indispensable.
8. No gymnastic exercises should be indulged in which lead to congestion of the head veins.

In conclusion would say:

1. By separating the *Near Blind* from the *Totally Blind,* a tremendous advance from an educational point of view was attained.

2. Day schools for the blind offer many advantages over the residential schools.

3. By reason of preventive work—Blindness among the young is being gradually brought to an almost irreducible minimum. Cincinnati with a population of 400,000 has but 36 blind children under 16 years of age i. e. 1 to 10,000, whereas, considering only the school population of 57,000 we have 1 to 1,500 blind.

4. During the past five years 225 children have been referred to this department, to 105 of whom it was possible to give such a degree of vision as to preclude their attendance.

5. One hundred and twenty were accepted. Fifty per cent of these were considerably improved, 11 in the course of a year to such a degree as to permit of their return to the regular classes. Fifty per cent remained stationary, and but 3 have shown any signs of deterioration. *Not a single child has progressed to total blindness,* a not infrequent outcome previous to the days of conservation of vision classes.

6. It is a significant fact that:

59%—71 cases disclosed pathologic changes which in various ways explain the reasons for the low degrees of vision.

41%—49 cases were refractive cases without any demonstrable pathologic changes. Carefully adjusted refractive errors did a great deal to lessen the eyestrain to which these children were subjected and which previous to the establishment of the conservation of vision classes was the undoubted cause of their retardation in school and to the progressive increase of their refractive errors especially the myopes.

7. The Conservation of Vision Classes are the greatest single forward step ever made for the benefit of this class of children who have very low degrees of vision and who sooner or later drifted into the blind classes. It gives them an equal chance with those of normal sight. Prepares them for a life of usefulness in the industrial world, as opposed to the limited sphere of usefulness formerly opened to them. Conserves their eyesight while preparing them.

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